

M b

a

Cont

- c) hybridizing a second amplification primer to the signal primer extension product and extending the hybridized second amplification primer on the signal primer extension product to produce a second amplification primer extension product comprising a newly synthesized strand;
- d) displacing the newly synthesized strand from the signal primer extension product; and
- e) hybridizing the signal primer to the displaced newly synthesized strand and extending the signal primer such that a double stranded secondary amplification product is generated.

29. (amended) A method for concurrently generating a secondary amplification product and an amplification product in a primer based nucleic acid amplification reaction, the method comprising:

A²

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- a) hybridizing a first signal primer to a first strand of a double-stranded target sequence and hybridizing a first amplification primer to the first strand of the target sequence upstream of the first signal primer;
- b) extending the hybridized first signal primer on the first strand to produce a first extension product and extending the hybridized first amplification primer on the first strand such that extension of the first amplification primer displaces the first extension product from the target sequence;
- c) hybridizing a second signal primer to the first extension product and hybridizing a second amplification primer to the first extension product upstream of the second signal primer;
- d) extending the hybridized second signal primer on the first extension product to produce a second extension product and extending the hybridized second amplification primer on the first extension product such that extension of the second amplification primer displaces the second extension product from the first extension product; and
- e) hybridizing the first signal primer to the displaced second extension product and extending the hybridized first signal primer on the second extension product such that a double stranded secondary amplification product is generated.